

REMARKS

The Office Action of December 13, 2005 has been received and carefully reviewed, and claims 1 and 20 have been amended in response. Claim 1 has been amended to clarify references to coded information and measurement adjustment information without narrowing the scope thereof, and claim 20 has been amended to correct a typographical error, by which this claim now depends from claim 19 rather than from claim 9. Applicants note with appreciation the indication in the Office Action that claims 6, 8, 10, 16, 18, and 20 would be allowable if rewritten in independent form, and believe that the corresponding base independent claims 1 and 11 are allowable, and therefore that claims 6, 8, 10, 16, 18, and 20 are themselves in condition for allowance in dependent form. Reconsideration of pending claims 1-20 is respectfully requested in view of the above amendments and the following remarks.

I. REJECTION OF CLAIMS 1- 5, 7, 9, 11-15, 17, AND 19 UNDER 35 U.S.C. § 102

Claims 1- 5, 7, 9, 11-15, 17, and 19 were rejected as being anticipated by U.S. Application Publication No. US 2001/0055969 to Bonta et al (Bonta). Reconsideration and withdrawal of these claim rejections is respectfully requested under 35 U.S.C. § 102 for at least the following reasons.

Independent claim 1 is directed to a method for cell switching by system equipment of a wireless communication system, in which the system equipment determines whether received information is coded information indicating a mobile's intent to switch from a serving system equipment to a particular target system equipment identified by the coded information that contains channel measurement adjustment information for the serving system equipment. In the method of independent claim 11, the mobile transmits coded information that indicate the mobile's intent to switch from its serving system equipment to a target system equipment identified by the coded information that contains channel measurement adjustment information for the serving system equipment.

Prior to Applicants' invention, a serving base station had to determine whether a given frame received from the mobile was a switch frame (Applicants' Fig. 1) indicating that the mobile wants to switch to a target cell having the particular cover code and thus wishes to commence a switching procedure, where detecting the existence of a switch frame required the serving base station to process up to 208 waveforms, as set forth in Applicants' specification at pages 6 and 7. This complex switch frame detection

heretofore increased the likelihood of not detecting the switch frame, because of which the mobile may be forced to increase its transmit power to compensate for the unreliability of reception at the base station. In addition, the use of the first four slots of the conventional switch frame for carrier-to-interference (C/I) information related to the target base station reduced the amount of adjustment information that would be normally transmitted in non-switch frames, whereby the prior approach limited the ability of the serving base station to properly serve the migrating mobile during cell switching.

In the methods of the pending claims, the mobile provides, and the system equipment receives, coded information that both indicates a target system equipment for a handoff and includes channel measurement adjustment information for the serving system equipment, where Applicants' Fig. 4 illustrates an example of such a frame. Since the coded information transmitted by the mobile is interpreted by the network equipment as the mobile's intent to switch cells and because the coded information contains information indicating to which cell the mobile wants to switch, the amount of switch processing performed by the serving system equipment can be significantly reduced. The coded information further provides channel measurement adjustment information so as to avoid interrupting the flow of such adjustment information from the mobile to the serving system equipment.

Bonta appears directed to the provision of a rescue channel for avoiding or mitigating dropped calls, in which each cell reserves a single rescue channel. Handoffs to the rescue channel are enabled without the need for sending or receiving handoff control messages, thereby reducing the occurrence of dropped calls by performing a handoff that would normally fail when the traditional handoff control message are not able to be exchanged between the mobile and the infrastructure. A coordinated rescue procedure is provided in Bonta at the infrastructure and mobile station by initially disabling the mobile transmitter followed by subsequent detection of signal loss and frame erasures at the serving cells, after which the mobile transmitter is enabled. A rescue cell then detects a signal and enables its cell channel transmitter, and thereafter the mobile detects and receives signal and data frames (Bonta abstract, paragraph 0012, Figs. 3-7 and associated description). Once the infrastructure has successfully performed a rendezvous with the first mobile, a handover command is sent to the rescued mobile for transfer to a normal traffic channel, thereby freeing up the rescue channel for use by another mobile (Bonta paragraph 0013).

The Office Action cites to paragraphs 0022 and 0029 of Bonta with respect to independent claims 1 and 11, but these portions appear to simply indicate conventional CDMA soft handoff processing. Regarding claims 1-5, 7, and 9, the base transceiver stations (BTSs) and base station controllers (BSCs) of Bonta do not appear receive coded information indicating a mobile's intent to switch from a serving system equipment to a particular target system equipment identified by the coded information that contains channel measurement adjustment information for the serving system equipment. With respect to independent claim 11 and dependent claims 12-15, 17, and 19, the mobile 330 of Bonta does not appear to send coded information to base stations 311 that both indicates the mobile's intent to switch to a particular target station 312 and contains measurement adjustment information for the serving base station 311. In this regard, the form and content of the forward and reverse link communications signals 361 362, 363, and 371, 372, 373 in general, as well as the details of specific CDMA handoff control messages in Bonta are not specified, and appear to be conventional CDMA communications signals, wherein Bonta do not teach all the aspects of the rejected claims. Furthermore, the invention of Bonta appears to provide mechanisms to reduce the probability that a call will drop when communications break down between a mobile and the infrastructure by providing a coordinated rescue procedure as an alternative to the traditional method to perform a handoff that uses handoff control messages embedded in traffic channel frames between the mobile and infrastructure.

In contrast to Bonta, the features of the present invention allow a mobile to send coded information to a serving system equipment indicating the mobile's intention to switch to a cell having a target system equipment specifically identified by the coded information, as exemplified in the switch frames of Applicants' Figs. 4-6. In the example of Fig. 4, slots 2, 3, and 4 of the switch frame are contained in a signal coded with a null code whereby the signal can be received and interpreted by serving cell A, target cell B, and other cells, where slots 2-4 identify system equipment B as the target cell. In addition, the switch frame of Fig. 4 includes measurement adjustment information in slots 5-16 for the current serving system equipment A. Similarly, the exemplary switch frames of Figs. 5 and 6 include coded information indicating the mobile's intent to switch from a serving system equipment to a particular target system equipment identified by the coded information, as well as channel measurement adjustment information for the serving system equipment, as set forth in independent claims 1 and 11. Because the coded information transmitted by the mobile is interpreted by the network equipment as

the mobile's intent to switch cells and because the coded information contains information indicating to which cell the mobile wants to switch, the amount of switch processing performed by the serving system equipment can be significantly reduced, wherein the conventional CDMA soft-handoff features alluded to in Bonta do not appear to achieve these advantages. Furthermore, the coded information of claims 1 and 11 also provides channel measurement adjustment information to the serving cell in the switch frame, and thus the invention does not interrupt the flow of such adjustment information from the mobile to the serving system equipment. Moreover, with respect to the claims of the present invention, Applicant has found no teaching or suggestion in Bonta for a mobile sending coded information to the system equipment that indicates the mobile's intent to switch from a serving system equipment to a particular target system equipment identified by the coded information that contains channel measurement adjustment information for the serving system equipment. Therefore, Bonta fails to teach all the elements of independent claims 1 and 11. Dependent claims 2-5, 7, 9, 12-15, 17, and 19 recite further distinguishing features and are therefore also believed to be patentably distinct over Bonta for at least this reason. Applicants therefore respectfully request reconsideration and withdrawal of the rejections of claims 1-5, 7, 9, 11-15, 17, and 19 under 35 U.S.C. § 102.

II. CLAIM OBJECTIONS AND ALLOWABLE SUBJECT MATTER

Claims 6, 8, 10, 16, 18, and 20 were objected to on page 7 of the Office Action as being dependent upon a rejected base claim, but were indicated as being allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants believe that the base independent claims 1 and 11 are not anticipated by the Bonta reference, and therefore that claims 6, 8, 10, 16, 18, and 20 were objected to on page 7 are believed to be in condition for allowance in dependent form, wherein reconsideration and withdrawal of the objections thereof is respectfully requested.

CONCLUSION

In response to the Office Action, claims 1 and 20 have been amended. For at least the above reasons, the currently pending claims 1-20 are believed to be in condition for allowance and notice thereof is requested.

Should the Examiner feel that a telephone interview would be helpful to facilitate favorable prosecution of the above-identified application, the Examiner is invited to contact the undersigned at the telephone number provided below.

Should any fees be due as a result of the filing of this response, the Commissioner is hereby authorized to charge the Deposit Account Number 06-0308, LUTZ200437.

Respectfully submitted,

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1/31/06
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